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10/074,765

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THE DIRECTV GROUP, INC.
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ASHISH BANERJI and KUMAR SWAMINATHAN

Appeal 2011-001358
Application 10/074,765¹
Technology Center 2400

Before JOHN A. JEFFERY, MARC S. HOFF, and ELENI MANTIS
MERCADER, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1-23. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Appellants' invention concerns a method and system for compressing video by grouping video frames that are only between consecutive I-frames

¹ The real party in interest is The DIRECTV Group, Inc.

into a video data set of non-intra video frames, splitting the video data set into a plurality of homogeneous files, and individually compressing each of the homogeneous files (Figs. 1 and 3; Spec. 2, 3, 5, 7, and 16; Abstract).

Claim 1 is exemplary of the claims on appeal:

1. A method of compressing video, comprising:

grouping video frames that are only between consecutive I-frames into a video data set;

splitting the video data set into a plurality of homogeneous files; and

individually compressing each of the homogeneous files.

The Examiner relies upon the following prior art in rejecting the claims on appeal:

Savatier	US 5,400,075	Mar. 21, 1995
Caranahan	US 5,414,780	May 9, 1995
Weinberger	US 5,680,129	Oct. 21, 1997
Kato	US 5,719,986	Feb. 17, 1998
Moroney	US 5,771,239	Jun. 23, 1998
Tahara	US 5,805,225	Sep. 8, 1998

Claims 1, 2, and 11-23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Savatier.

Claims 3, 5, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Savatier in view of Tahara.

Claims 4 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Savatier in view of Carnahan.

Claims 6, 7, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Savatier in view of Kato.

Claims 8 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Savatier in view of Weinberger.

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Savatier in view of Moroney.

Throughout this decision, we make reference to the Appeal Brief (“App. Br.,” filed Jun. 9, 2010), the Reply Brief (“Reply Br.,” filed Oct. 5, 2010) and the Examiner’s Answer (“Ans.,” mailed Aug. 5, 2010) for their respective details.

ISSUES

Appellants argue, *inter alia*, that Savatier is silent as to (a) whether the P-frames and B-frames between two I-frames are compressed independently of any other frames, (b) grouping video frames that are only between consecutive I-frames into a video data set (as set forth in independent claims 1, 17, 19, and 22), and (c) splitting the video data set consisting of non-intra video frames into a plurality of data sequences (as set forth in independent claim 21) (App. Br. 8).

Appellants' contentions present us with the following issues:

1. Does Savatier teach grouping video frames that are only between consecutive I-frames into a video data set?
2. Does Savatier teach that the P-frames and B-frames between two I-frames are compressed independently of any other frames?
3. Does Savatier teach splitting the video data set consisting of non-intra video frames into a plurality of data sequences?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Savatier

1. Savatier teaches that the MPEG protocol divides successively occurring frames into sequences or groups of frames, GOF (col. 2, ll. 48-50).

PRINCIPLES OF LAW

“A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference.” *See In re Buszard*, 504 F.3d 1364, 1366 (Fed. Cir. 2007) (quoting *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994)).

Anticipation of a claim requires a finding that the claim at issue reads on a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346

(Fed. Cir. 1999) (quoting *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 781 (Fed. Cir. 1985)).

Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

ANALYSIS

§ 102 REJECTION

Independent claims 1, 17, 19, and 22 recite “grouping video frames that are only between consecutive I-frames into a video data set.”

Independent claim 21 recites “splitting the video data set consisting of non-intra video frames into a plurality of data sequences.”

We disagree with the Examiner's finding (Ans. 4, 12) that Savatier discloses grouping frames that are only between consecutive I-frames into a video data set. Rather, we agree with Appellants (App. Br. 8) that Savatier teaches "divid[ing] successively occurring frames into sequences or groups of frames, GOF" (FF 1).

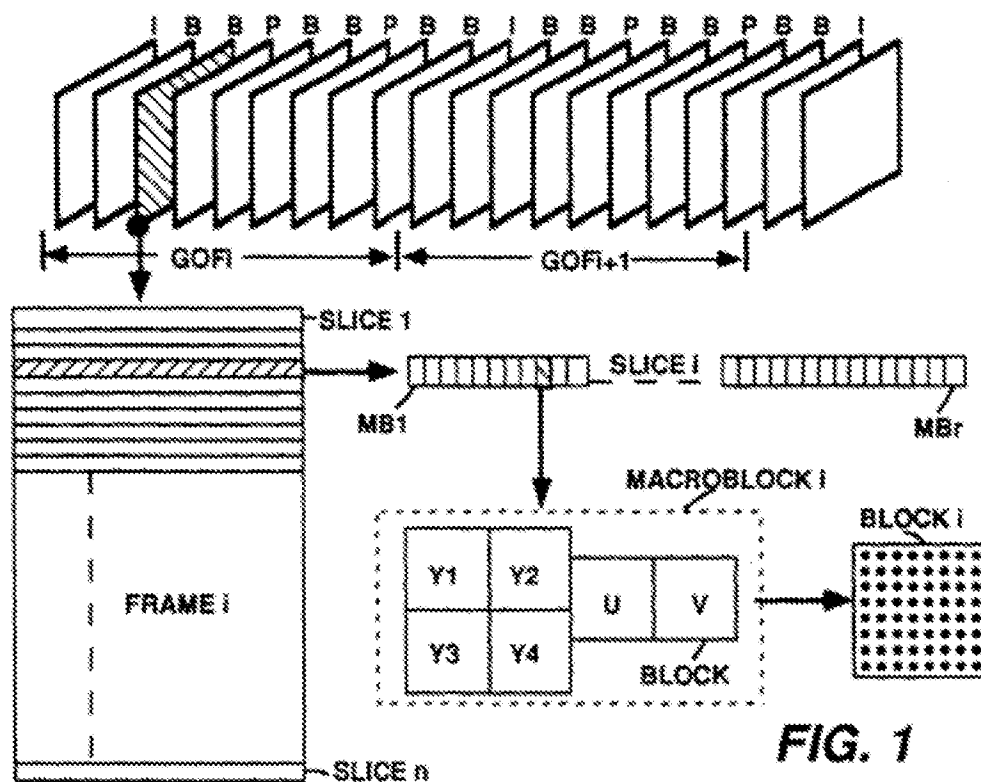


Figure 1 of Savatier is a pictorial representation of the MPEG-like signal coding hierarchy. We agree with Appellants that each group of frames (GOF) illustrated, GOFi and GOFi+1, includes at least one I-frame (Savatier Fig. 1; see App. Br. 8). We, therefore, find that Savatier lacks a

teaching of grouping video frames that are *only* between consecutive I-frames into a video data set, as claims 1, 17, 19, and 22 require. We further find that Savatier lacks a teaching of splitting the video set consisting of non-intra video frames into a plurality of data sequences, as claim 21 requires.

Consequently, we find that Savatier does not teach all the limitations of the invention recited in independent claims 1, 17, 19, 21, and 22. We, therefore, find that the Examiner erred in rejecting claims 1, 17, 19, 21, and 22, as well as dependent claims 2, 11-16, 18, 20, and 23, under § 102 as being anticipated by Savatier, and we will not sustain the Examiner's rejection.

§ 103 REJECTIONS

Claims 3-10 each depend from independent claim 1, discussed *supra*. We have reviewed the patents to Tahara, Carnahan, Kato, Weinberger, and Moroney, and find that none of them remedies the deficiency of Savatier in grouping video frames that are only between consecutive I-frames. We, therefore, find that the Examiner erred in asserting the prima facie obviousness of these claims. Accordingly, we will not sustain the § 103 rejection of claims 3-10, for the reasons expressed *supra* with respect to the § 102 rejection of claims 1, 2, and 11-23.

CONCLUSIONS

1. Savatier does not teach grouping video frames that are only between consecutive I-frames into a video data set.
2. Savatier does not teach that the P-frames and B-frames between two I-frames are compressed independently of any other frames.
3. Savatier does not teach splitting the video data set consisting of non-intra video frames into a plurality of data sequences.

ORDER

The Examiner's rejection of claims 1-23 is reversed.

REVERSED

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